

ABSTRACT OF THE DISCLOSURE

Disclosed are methods and apparatus for providing redundant data forwarding or routing capabilities. In one embodiment, a network device includes a designated router and a non-designated router. The designated router generally provides layer 3 switching or routing for data received into the network device. Although the non-designated router is active, it generally does not provide forwarding capabilities until the designated router fails. The non-designated router's logical interfaces are disabled, while the designated router's logical interfaces are enabled. The non-designated router becomes the new designated router when the first designated router fails. In general terms, the routers of the network device provide redundancy with the network being aware of only a single router within network device. That is, the network is only aware of a single router. This is accomplished by having the routers share the same IP and MAC address on each logical interface. The routers do not each also use a unique IP and MAC address in addition to the shared IP and MAC address, in contrast to conventionally configured routers of the hot standby router protocol (HSRP).